

PHASE I BOOK EXPLOITATION

231

FRAYFEL'D, Isay Abramovich., Candidate of Technical Sciences, Docent

- Raschety i konstruksii spetsial'nogo metalloreshushchego instrumenta; fasonnyye reztsy, fasonnyye frezy, chervyachnyye frezy dlya zubchatykh detaley (Calculation and design of special tools for metal cutting; forming, form-milling and hobbing cutters, used in machining geared parts) Moscow, Mashgiz, 1957. 195 p. 12,000 copies printed.

Reviewer: Shchegolev, A. V.; Doctor of Technical Sciences; Ed.: Morozov, V. D., Candidate of Technical Sciences; Ed. of Publishing House: Simonovskiy, N. Z.; Tech. Ed.: Pol'skaya, R. G.; Corrector: Khoroshkevich, V. M.

PURPOSE: This book is intended for engineers, designers and technicians engaged in the machine tool industry. It may also be profitably read by students of machine design.

COVERAGE: The author states that the design of good metal cutting tools requires precise and often laborious calculations. This book contains formulas and detailed instructions together with tables and graphs which

Card 1/11

Calculation and design of (Cont.)

231

should simplify the work of the tool designer. The means of calculating proper profiles of form cutters, cutting tools, milling and hobbing cutters having wide application in the industry are described in detail. Emphasis is on the theory of cutting tool design. The author expects that the new methods of calculation will be of value to tool designers. There are 16 Soviet references

TABLE OF
CONTENTS:

Preface

3

PART I. FORM-CUTTING TOOLS

5

Ch. I. Dimensions of Form Cutting Tools

6

1. Flat form tools

6

2. Circular form tools

7

3. Form-tool rake and clearance angles

9

4. Additional cutting edges of form tools

9

Card 2/11

25(7)

PHASE I BOOK EXPLOITATION SOV/2398

Frayfel'd, Isay Abramovich, Candidate of Technical Sciences, Docent

Raschety i konstruktsii spetsial'nogo metallovezhushchego instrumenta; fasonnyye reztsy, fasonnyye frezy, chervyachnyye frezy dlya zubchatykh detaley (Design and Constructions of Special Metal-cutting Tools; Forming Tools, Form Cutters, and Hobs) 2d ed., unrev. Moscow, Mashgiz, 1959. 195 p. 8,000 copies printed.

Reviewer: A.V. Shchegolev, Doctor of Technical Sciences, Professor;
Ed.: V.D. Morozov, Candidate of Technical Sciences; Ed. of
Publishing House: N.Z. Simonovskiy; Tech. Ed.: R.G. Pol'skaya;
Managing Ed. for Literature on Design and Operation of Machines
(Leningrad Division, Mashgiz): F.I. Fetisov, Engineer.

PURPOSE: This book is intended for engineers, designers of metal-cutting tools, and technologists in mechanical assembly. It also may serve as a textbook for students of machine-building vuzes.

COVERAGE: The author discusses proper selection of designs and formulas for forming tools, milling cutters, and hobs. Examples
Card 1/4

Design and Constructions (Cont.)

SOV/2398

of typical designs, formulas, and calculations are given in handbook form in order to facilitate design work. Several design formulas, which the author describes as new, are also included. No personalities are mentioned. There are 16 references, all Soviet.

TABLE OF CONTENTS:

Preface	3
PART 1. FORMING TOOLS	5
Ch. I. Constructional Dimensions of Forming Tools	6
Ch. II. Designing Forming-tool Profiles	11
Ch. III. Designing Forming Tools With Ordinary Mounting on the Machine Tool	31
Ch. IV. Designing Forming Tools With Special Mounting on the Machine Tool	42
Card 2/4	

Design and Constructions (Cont.)

SOV/2398

PART 2. FORM CUTTERS

Ch. V. Construction Dimensions of Form Cutters	67
Ch. VI. Designing Form Cutters	81
Ch. VII. Gear and Worm Cutters	105

PART 3. HOBS

Ch.VIII. Spline-shaft Hobs	130
Ch. IX. Designing Spline-shaft Hobs	131
Ch. X. Examples of Designing Spline-shaft Hobs	143
Ch. XI. Elongated-tooth Spline-shaft Hobs	151
Ch. XII. Single-position Hobs	162
Ch.XIII. Examples of Designing Single-position Hobs	166
Card 3/4	169

Design and Constructions (Cont.)	SOV/2398	
Ch. XIV. Hobs for Cutting Machine Sprockets		179
Appendix		190
Bibliography		193
AVAILABLE: Library of Congress		
Card 4/4		
	GO/ec	
	10-22-59	

FRNYFEL'D, M. A.										19									
COMMON ELEMENTS										COMMON VARIABLE MOIE									
1ST AND 2ND ODDIES										3RD AND 4TH ODDIES									
PROCESSES AND PROPERTIES INDEX																			
<p>CA</p> <p>Corundum refractories for lining the sintering zone of rotary cement kilns. M. A. Fraifeld. <i>Ogneupory</i> 8, 265-71 (1940).—Refractories made from crushed, electrically fused corundum with a refractory clay bond are highly refractory (1770°) and highly resistant to spalling to corrosion by slags and to loads at high temps. H. E. Stefanowsky</p>																			
ASM-AIA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST ODDIE										2ND ODDIE									
3RD ODDIE										4TH ODDIE									

CA FRAYFEL'D, M.A.

17

Thermal
Aluminothermic corundum. M. V. Kamensky and M. A. Prayfel'd. *Lekhdy Akad. Nauk S.S.S.R.* 70, 71-7 (1950). *Prayfel'd* (C.A. 40, 7008) proved that the corundum slag formed in aluminothermic production of Cr metal, ferrutitanium, etc., was an inferior abrasive because the crystals were small, irregular, and impure in comparison with arc-furnace fused corundum. The aluminothermic product was more like ordinary emery. Pevzner (C.A. 44, 3224), however, suggested methods for improving the material. For corundum with only 1-1.5% Fe_2O_3 , an excess of 10-15% Al must be supplied. The Fe_2O_3 content of the corundum was a function of the excess or deficit of Al in the original mix. The crystal size in melts of 10-20 kg. batch wt. was only 0.1-0.25 mm. diam., 0.5-0.8 mm. from batches of 50-300 kg. The crystal form is the usual rhombohedral dendritic aggregate; spines are observed only in mixes with a deficit in Al. The abrasive quality of these improved products was 80-90% of that in electro-corundum. In spite of the simplicity of the aluminothermic method, the decidedly lower quality of the products limits its success.

W. Rittel

✓ 951

SAVINOVSKIY, D.A., inzh.; PRAYFEL'D, M.B., inzh.

Water flushing of the runner of the K-200-130 turbine.
Elek. sta. 36 no. 12:30-32 D '65. (MIRA 18:12)

FRAYFEL'D, S.E.

27709.

Osnovy teorii predvaritel'no napryazhennykh zhelezobetonnykh
konstruktsky na base eksperimental'nykh issledovaniy.
Trudy IV vsesoyuz. Konf-tsii po betonu i zhelezobeton.
Konstruktsiyam. Ch. 2. M.-L., 1949, s. 30-42.

SO: Knizhnaya Letopis, Vol. 1, 1955

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 8, p 126 (USSR) SOV/124-57-8-9451

AUTHOR: Frayfel'd, S. Ye.

TITLE: On the Basic Premises Underlying the Equations for the Stress-strain States in Real Materials (Ob iskhodnykh predposylkakh uravneniy mekhanicheskogo sostoyaniya real'nykh materialov)

PERIODICAL: Tr. Khar'kovsk. inzh.-stroit. in-ta, 1955, Nr 4, pp 15-69

ABSTRACT: Primarily in connection with aftereffect phenomena in concrete, the author sets forth in detail the basic premises underlying the currently accepted mathematical description of unbalanced deformation processes. The validity is assumed of the principle of deformation-increment analysis embodied in the equation

$$\Delta \epsilon(t) = \Delta \epsilon_M(s) + \Delta \epsilon_n(s, t) \quad (1)$$

wherein: $\Delta \epsilon(t)$ is a strain increment developed up to the moment in time t caused by a stress increment $\Delta \sigma(s)$ that has occurred at the moment in time $s < t$; $\Delta \epsilon_M(s)$ is the instantaneous strain increment

Card 1/4

SOV/124-57-8-9451

On the Basic Premises Underlying the Equations for the Stress-strain States (cont.)

which is constant at any $t > s$; $\Delta_n(s, t)$ is the aftereffect-strain increment occurring up to the moment in time t caused by the stress increment $\Delta(s)$. It is assumed that

$$\epsilon_M(s) = f[\sigma(s), \theta_0 + s],$$

wherein θ_0 is the age of the material at the start of the time period in question. The simple-aftereffect strain, represented here by the symbol $\overline{\epsilon}_n$, is the name given to a strain that develops some time after the instantaneous application of a load which, once applied, remains constant. For the purpose of experiments relating to this type of strain it is assumed that

$$\overline{\epsilon}_n = P_0[\sigma(s), t-s],$$

wherein the stress σ is applied at the moment in time s . The time period involved is considered to start with, and is measured from, the commencement of the "pre-history" of the load application, which is to say that account is taken of all possible antecedent influences. It is assumed that: 1) an aftereffect strain developing after the strain-causing stress has become stabilized at the moment in time s is not affected by the conditions of any previous loading but is affected only by the present constant stress $\sigma(s)$ and by the strain $\epsilon(s)$ that has developed up to the moment

Card 2/4

SOV/124-57-8-9451

On the Basic Premises Underlying the Equations for the Stress-strain States (cont.)

at which the stress $\sigma(s)$ becomes stabilized; 2) when a stress $\sigma(s)$, which has remained constant since its stabilization at the moment in time s , has been the cause of an aftereffect strain, which is considered thus to be in existence since said moment in time s ; this aftereffect strain will be a function only of said stabilized constant stress $\sigma(s)$ and of the time having elapsed between the commencement of the "prehistory" of the stress causing loading and the subsequent moment in time s . Thus

$$\epsilon_n(s, t) = P[\sigma(s), t, s, \theta_0 + s], \quad (2)$$

and the following relationship is established between aftereffect strains and simple aftereffect strains

$$P[\sigma(s), s, t, \theta_0 + s] = P_0[\sigma(s), t, \theta_0] - P_0[\sigma(t), t, \theta_0] \quad (3)$$

On the strength of the aforecited assumptions the author is able to obtain for an unbalanced-strain process the differential equation

Card 3/4
$$\frac{d\epsilon(t)}{dt} = \frac{1}{E'(\theta_0 + t)} \frac{d\sigma(t)}{dt} + \frac{\partial}{\partial t} P_0[\sigma(t), t, \theta_0] \quad (4)$$

On the Basic Premises Underlying the Equations (cont.) SOV/124-57-8-9451

wherein $E'(0_0 + t)$ is the local strain modulus when the age of the material is $0_0 + t$. The author uses this equation to determine the stress for a prescribed mode of strain development, it being stipulated that the instantaneous strains and simple-aftereffect strains are linear functions of the stress---in which case equation (4) becomes linear. The matter of relaxation is discussed in detail. A solution is found for the problem of determining the stress for a prescribed mode of strain development when the material's relaxation characteristics are known. The concluding section of this paper is devoted to an analysis of: 1) The problem of how best to represent balanced and unbalanced strain processes, and 2) the various current theories existing on this subject. It is the author's contention that the plasticity-theory equations of Saint-Venant and von Mises, as well as those of Reuss, are out of date---with which the reviewer begs to disagree, for the Reuss equations (of which the Saint-Venant/Mises equations constitute one particular case) essentially do not contain a time factor and thus are in full agreement with conclusions of the thermodynamics of irreversible balanced processes. The author comments negatively on the aftereffect theory of Boltzmann, on the equation of N. M. Belyayev, on the current theory of the work-hardening process, and on the Nadai concept of creep phenomena in metals---all of which comments the reviewer considers very much open to debate.

Card 4/4

L. M. Kachanov

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 174 (USSR) SOV/124-58-11-13086

AUTHOR: Frayfel'd, S. Ye.

TITLE: General Equations of the Theory of the Deformation of Materials
(Obshchiye uravneniya teorii deformatsiy materialov)

PERIODICAL: Tr. Khar'kovsk. inzh. -stroit. in-ta, 1957, Nr 5, pp 3-37

ABSTRACT: Starting with the "stress-strain" equations as applied to the simplest forms of strain, namely, elongation, transverse deformation, and pure shear (these equations are based on the author's previous works dealing with the description of combined effects of plasticity, creep, and after-effects), the author proposes that a "stress-strain" relationship, derived by means of simple summation of the three basic types of deformations indicated above, be adopted as a general equation for strains occurring under complex stress distribution. However, the author overlooks the fact that the principle of independent action of the three simplest types of strain (an indispensable condition for the validity of the method proposed) is not satisfied even in the case of plastic substances (the action of preliminary elongation influences the subsequent process of shear).

V. D. Klyushnikov

Card 1/1

FRAYFEL'D, S.Ye., professor; PAL'CHINSKIY, O.V., inzh.

Practical methods for designing reinforced concrete construction elements taking into account rheological properties of materials. Sbor.trud.IUZHNII no.3:3-63 '59.
(MIRA 13:7)

(Strains and stresses)
(Rheology)

Report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics,
Moscow, 27 Jan - 3 Feb '60.

- FRAY, F. D., S. Y.
268. L. A. Shvachkin (Leningrad): Strain design and general stability of structures.
 269. L. A. Shvachkin (Leningrad): A general method of solving boundary value problems of structural mechanics.
 270. B. D. Pivovarov (Moscow): A contribution to the non-linear problem of plate bending.
 271. V. G. Pivovarov (Moscow): On the use of the method of moments in the solution of problems of plastic equilibrium.
 272. A. I. Smirnov (Moscow): Dimensional investigation of the stability of a beam under a load beyond the elastic limit.
 273. A. I. Smirnov (Moscow): Strength and viscoplastic flow of metals.
 274. G. I. Smirnov (Moscow): The relation between pore pressure and rate of creep of alloys.
 275. L. A. Pivovarov (Moscow): Plastic plastic strains of non-linearly deformed bodies.
 276. A. I. Smirnov (Moscow): Plotting of metals by a spherical punch considering contact friction.
 277. V. G. Pivovarov (Moscow): An asymptotic method of calculating flexural stresses of variable plates at high speeds of rotation.
 278. L. A. Shvachkin (Moscow): Application of similarity methods to the analysis of the flow of rubber compounds.
 279. L. A. Shvachkin (Moscow): Dependence of the critical load on the dimensions of a plate with a rectangular hole on elastic stress.
 280. L. A. Shvachkin (Moscow): An asymptotic method for the design of laminated shells.
 281. V. G. Pivovarov (Moscow): Some problems of soil dynamics.
 282. L. A. Shvachkin (Moscow): The flow in the boundary layer of an elastic body.
 283. L. A. Shvachkin (Moscow): Some problems concerning the stability of structures in elastic flow.
 284. L. A. Shvachkin (Moscow): On the use of the method of moments in the solution of problems of plastic equilibrium.
 285. L. A. Shvachkin (Moscow): Some problems of non-linear creep.
 286. L. A. Shvachkin (Moscow): Some problems of non-linear creep in the solution of problems of plastic equilibrium.
 287. L. A. Shvachkin (Moscow): The problem of elastic strength of fluid superconducting structures.
 288. L. A. Shvachkin (Moscow): Application of integral transformations to the solution of some problems concerning elastic stress.
 289. L. A. Shvachkin (Moscow): Deformations of plastic slabs in bending.
 290. L. A. Shvachkin (Moscow): Elastoplastic equilibrium of an elastic body.
 291. L. A. Shvachkin (Moscow): Stability and vibration of anisotropic plates of variable thickness.
 292. L. A. Shvachkin (Moscow): Bimaterial vibrations of curved slabs.
 293. L. A. Shvachkin (Moscow): On the possibility of controlling the rate and time-varying character of rupture.
 294. L. A. Shvachkin (Moscow): Some problems concerning the bending of plates and shells with stiffeners.
 295. L. A. Shvachkin (Moscow): On the limit of a wave on a heavy liquid.
 296. L. A. Shvachkin (Moscow): Some problems concerning the formation of hydrodynamic structures.
 297. L. A. Shvachkin (Moscow): Present state and problems of elastoplasticity.
 298. L. A. Shvachkin (Moscow): Plane conditions for saturated soils.
 299. L. A. Shvachkin (Moscow): Experimental study of soil and apparent friction in vibrating media.
 300. L. A. Shvachkin (Moscow): On the construction of the function for the solution of problems of elastic stress.
 301. L. A. Shvachkin (Moscow): Further development of the initial boundary value problem.
 302. L. A. Shvachkin (Moscow): Temperature stresses in multilayer plates and their effect on stability.

FRAYMAN, A.L.: SHUSHKIN, N.N., kand. istor. nauk, nauchnyy red.; VASIL'YEV,
A.V., red. izd-va; GURDZHIYeva, A.M., tekhn. red.

[Revolutionary traditions of St. Petersburg workers] Revoliutsionnye
traditsii Pterskikh rabochikh. Leningrad, Ob-va po rasprostraneni
polit. i nauchnykh znani RSFSR, Leningr. otd-nie, 1957. 33 p.
(Leningrad—Labor and laboring classes) (MIRA 11:9)

FRAYMAN, A.L., doktor istoricheskikh nauk, prof.

Vladimir Il'ich Lenin and the foundation of Soviet aviation.
Grazhd. av. 19 no.4:1-3 Ap '62. (MIRA 15:5)
(Lenin, Vladimir Il'ich, 1870-1924)
(Aeronautics, Commercial)

9.4300(3203,1043,1143)
26.1632

86828

S/020/60/135/005/016/043
B019/B067

AUTHORS: Bronshteyn, I. M., Frayman, B. S.

TITLE: Some Rules Governing the Emission of Secondary Electrons
From Thin Metal-And Semiconductor Layers

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 5,
pp. 1097-1100

TEXT: The authors studied secondary electron emission of Be, Bi, Ag, and Pt. The length of path of slow secondary electrons and the effectivity S of inelastically reflected electrons in the production of slow secondary electrons were determined by means of "equivalent" base layers and δ - η diagrams. δ and η are the coefficients of secondary electron emission of slow secondary electrons and fast elastically and inelastically reflected electrons. The authors study possible forms of coupling between δ and η by applying thin layers of one substance to the base layer of another. Measurements were made at -180°C in vacuo at approximately $5 \cdot 10^{-8}$ mm Hg. Control tests at $(4-5) \cdot 10^{-9}$ mm Hg showed that the coefficient

Card 1/4

Some Rules Governing the Emission of Secondary
Electrons From Thin Metal and Semiconductor
Layers

86828

S/020/60/135/005/016/043
B019/B067

η of inelastically reflected electrons is less pressure-dependent than the coefficient δ of secondary electron emission of slow electrons. Results are graphically represented in Figs. 3 and 4. It was found that, if the efficiency of the evaporated layer and the base layer are known, the dependence $\delta(\eta)$ may be predicted, hence also the coefficient of secondary electron emission $\sigma(d)$, where d denotes the thickness of layer. The authors thank Professor M. S. Kosman and Professor A. R. Regel' for their interest and discussions. There are 4 figures and 1 Soviet reference.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im.
A. I. Gertsena (Leningrad State Pedagogical Institute imeni
A. I. Gertsen)

PRESENTED: June 22, 1960, by A. F. Ioffe, Academician

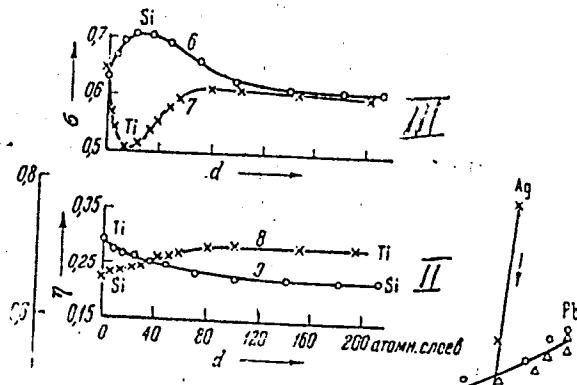
SUBMITTED: June 17, 1960

Card 2/4

86828

S/020/60/135/005/016/C43
B019/B067

Legend to Fig. 3: I) ξ as a function η for Pb layers on Al foil (Curve 1), and on Si (Curve 2), for Ti layers on Be (Curve 3), and on Ag (Curve 4). II) η as a function of the layer thicknesses (in atomic layers) of Si on Ti, and vice versa. III) η as a function of the layer thicknesses in analogy with II).

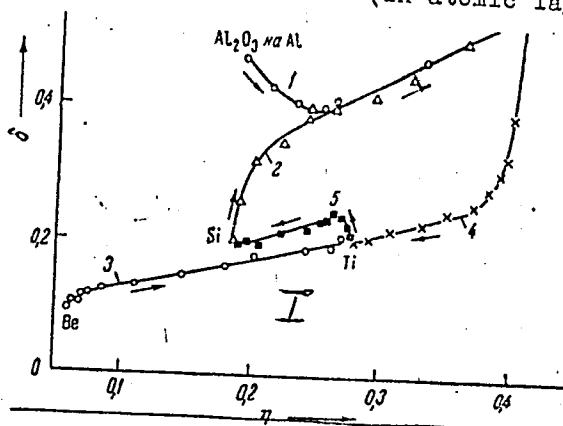


Card 3/4

86828

S/020/60/135/005/016/043
B019/B067

Legend to Fig. 4: I) ξ as a function of η for thin layers of Ca on beryllium (Curve 1), of Be on Ca (Curve 2), and of Ba on Ti (Curve 3). II) σ as a function of the thickness d (in atomic layers) for Ca on Be.



Card 4/4

22047

24,6600(1057, 1482)
26.1640

S/181/61/003/004/013/030
B102/B214

AUTHORS: Bronshteyn, I. M. and Frayman, B. S.

TITLE: Path of kilovolt electrons in solid bodies

PERIODICAL: Fizika tverdogo tela. v 3, no. 4, 1961, 1122-1124

TEXT: E. J. Sternglass (Phys. Rev. 95, 345, 1954) has shown that the inelastic reflection coefficient η of kv electrons by solid bodies depends in a quite definite way on the atomic number Z of the element: First, η increases linearly with Z ; at $Z = 25-30$ the curve has a bend and the further increase is only small but again linear. Therefore, it is to be assumed that, at electron energies greater than 1 kev, the total energy of the electrons is inversely proportional to Z . It is shown here that this in fact is the case. The ranges, l , of the electrons were measured by the method of thin layers; one has $l = kE_p^m$, where $m = 1.3-1.5$, and k is a coefficient depending on the material properties. The figure shows besides $\eta(Z)$ the function $l(Z)$ for $E_p = 3$ kev, where l is the path length in cm divided by the atomic volume A/ρ (A - atomic weight, ρ - density) of a given element

Card 1/3

Path of

S/181/61/003/004/013/030
B102/B214

($l = l_0/A$). In these coordinates, $l(Z)$ shows a hyperbolic form and can be described by $l = 2.8 \cdot 10^{-5}/Z$. If the energy (in kev) is considered,

$l = \frac{6 \cdot 10^{-6}}{Z} E_p^{1.4}$. ($m = 1.4$ was taken as the mean of $1.3-1.5$). The divergence between formula and experiment does not exceed the error of measurement. There are 1 figure and 8 references: 4 Soviet-bloc and 4 non-Soviet-bloc. The most important reference to English-language publications reads as follows: J. R. Young, J. Appl. Phys. 27, 1, 1956 and 28, 524, 1957.

ASSOCIATION: Leningradskiy gosudarstvennyy institut im. Gertsena (Leningrad State Institute imeni Gertsen)

SUBMITTED: July 14, 1960

Card 2/3

S/181/61/003/005/010/042
B101/B214

9.4300(1164, 1138, 1385)

AUTHORS: Bronshteyn, I. M., Frayman, B. S.

TITLE: The problem of determining the path length of slow true secondary electrons

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1371-1372

TEXT: It has been shown in Ref. 1 (I. M. Bronshteyn, R. Ye. Segal', DAN SSSR, 123, 639, 1958) that the path length λ of slow secondary electrons in metal A can be determined by studying the secondary electron emission of thin layers of metal A increasing in thickness placed on an "equivalent" base of metal B. This method was used to determine the path lengths of slow secondary electrons in Bi, Ag, and Pt, and from the breaks of the curves $E_p = \text{const.}$ in the δ, η diagram the path length in Be (Ref. 2: FTT, 1, 1489, 1959). For all metals investigated λ was of the same order of magnitude and did not exceed 8-12 atom layers. In the present work, the path lengths of slow secondary electrons were determined in Ca, Ba, and Be. The oxidized surfaces of Ca, Ba, and Be, respectively, were used as base layers

Card 1/5

23105

The problem of determining ...

S/181/61/003/005/010/042
B101/B214

($\eta_{\text{layer}} \approx \eta_{\text{base layer}}$; $\sigma_{\text{layer}} \neq \sigma_{\text{base layer}}$), as in this way there was a change neither in the character of the curves $\eta(E_p)$ (Ref. 3: Radiotekhn. i elektron. 5, 1471, 1960) nor in the values of η (Fig. a). The oxidation of Ba and Ca was done by a 3-5 minute long reduction of the vacuum to 10^{-3} mm Hg while the oxidation of Be was done by one minute contact with the atmosphere. Even in the most unfavorable case of the oxidation of Be where on account of the low value of η_{Be} the change in the conditions of electron scattering at the surface layer can lead to important changes of η , this change did not exceed 20% while δ was changed by 6-7 times. For the control of the results Ba was laid to Ag, and Ca to Ti ($\eta_{\text{Ba}} \approx \eta_{\text{Ag}}$; $\eta_{\text{Ca}} \approx \eta_{\text{Ti}}$). The thickness of the Ba and Ca layers were measured from the change of the coefficient of the secondary electron emission on adsorption in Mo. As shown by H. de Boer, and H. Bruining (Ref. 4: Physica, 6, 941, 1939) the photocurrent and σ for $E_p = \text{constant}$ reach practically simultaneously the maxima at optimal thickness of the layer which can be set as $d \approx 0.7$ atom layers (Ref. 5: V. M. Gavriluk, Ukr. fiz. zhurn., 1, 73, 1956). On adsorption of Ba by Ag, and

Card 2/5

The problem of determining ...

S/181/61/003/005/C1C/042
B1C1/B214

Ca by Ti σ reaches the maximum for the same values of d . Figs. 6, 6, 2 show the curves $\sigma(E_p)$ on adsorption by Be, Ba, and Ca, respectively. It is found that the curves are displaced in parallel and for all E_p simultaneously the same position is reached for thickness of 10 atom layers as is characteristic for massive layers of Be, Ba, and Ca. This agrees well with the data obtained in Ref. 2 by another method. [Abstractor's note: Complete translation]. There are 1 figure and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertsena, fizicheskiy fakul'tet (Leningrad State Pedagogical Institute imeni A. I. Gertsen, Department of Physics)

SUBMITTED: April 6, 1960 (initially); December 26, 1960 (after revision)

Card 3/5

23105

BRONSHTEYN, I.M.; FRAYMAN, B.S.

Secondary electron emission from certain solids. Fiz. tver. tela
3 no.9:2859-2860 S '61. (MIRA 14:9)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni
A.I. Gertsena.

(Secondary electron emission)

BRONSHTEYN, I.M.; FRAYMAN, B.S.

Nonelastic electron scattering and secondary electron emission
of certain metals and semiconductors. Fiz. tver. tela 3
no.6:1638-1649 Je '61. (MIRA 14:7)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut im.
A.I.Gertsena.
(Electrons--Scattering) (Secondary electron emission)
(Semiconductors)

BRONSETEYM, I.M.; FRAYMAN, B.S.

Secondary-emission properties of metals and semiconductors,
and the periodic table. Fiz.tver.tela 3 no.10:3220-3223 0 '61.
(MIRA 14:10)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni
A.I.Gertsena.

(Secondary electron emission) (Periodic law)

BRONSHTEYN, I.M.; FRAYMAN, B.S.

Secondary and photoelectron emission in the adsorption of Be and
Ag on Ba. Radiotekh. i elektron, 6 no.10:1769-1770 0 '61.
(MIRA 14:9)
(Adsorption) (Beryllium) (Silver)

26.1420

37727

S/139/62/000/002/027/028

E039/E435

AUTHORS: Bronshteyn, I.M., Frayman, B.S.

TITLE: On the question of "boundary" energy of slow true secondary electrons

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika.
no.2, 1962, 172-173

TEXT: It is usually assumed that the spectrum of secondary electrons has two parts, that due to slow true secondary electrons δ and the fast inelastically and elastically reflected primary electrons η . As a maximum "boundary" energy for true slow secondary electrons a value $E_2 = 50$ eV is usually assumed, although a sharp division between the two groups is not possible. It is shown in an earlier paper that for metals the δ part of the spectrum is formed in a surface layer $\sim 10^{-7}$ cm thick. Curves are presented showing $\eta(E_p)$ (E_p is the energy of the primary electrons) for clean and for oxidized surfaces of Ba, Ca and Be. The results are the same for both conditions in the case of Ba and Ca while the values of η for oxidized Be are slightly greater than for the pure metal. Delay curves are also plotted

Card 1/2

f

On the question of "boundary" ...

S/139/62/CCC/C02/027/028
E039/E435

for clean and oxidized surfaces of Ba, Ca and Be. For Ba and Ca the curves for the two conditions converge at $E_2 = 45$ to 50 eV but for Be they run parallel for $E_2 > 50$ eV. The "boundary" energy E_2 does not depend on E_p over the range 200 to 4000 eV. There is 1 figure. f.

ASSOCIATION: Leningradskiy gospedinstitut imeni A.I.Gertsena
(Leningrad State Pedagogical Institute imeni A.I.Gertsen)

SUBMITTED: January 25, 1961

Card 2/2

9.3120
26.2312

10407
S/109/62/007/009/016/018
D409/D301

AUTHORS: Bronshteyn, I.M., and Frayman, B.S.

TITLE: Inelastic scattering and secondary emission of electrons from solids

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 9, 1962, 1643 - 1648

TEXT: The free path of medium-energy electrons of Ni, Cu, Ga, Tl, Sn, Ge, Sr, Ag, In, is determined. The role of inelastically-scattered electrons in the secondary emission from Ga, Ge, Sr, In, Sn and Tl, is estimated. The experimental procedure was described by the authors in the references. The free path l was determined from the diagram $\eta(E_p)$, where η is the coefficient of secondary emission of fast electrons and E_p the energy of primary electrons. For all the investigated elements, the free path can be approximated by the formula.

$$l_p = kE_p^n \quad (1)$$

Card 1/2

Inelastic scattering and ...

S/109/62/007/009/016/018
D409/D301

where k and n are constants which are characteristic of each element. As an example, the family of curves $\eta_d(E_p)$ is given, obtained by spraying Sn and Sr on a Be-base. The role of inelastically-scattered electrons in the secondary emission, was determined from the $\delta - \lambda$ diagram (δ being the secondary-emission coefficient of slow electrons), obtained by spraying Sr on Be. It was found that a change in the work function of the target leads only to a twofold increase in the slow component of secondary emission (δ), whereas the fast component (η) is not affected. The secondary-emission parameter S (the efficiency of "inverse" electrons) is constant for a given element and does not depend on the properties of the base material. This can be interpreted as follows: With a layer thickness $d \geq \lambda$, (λ denoting the region of outflow of slow secondary-electrons), the shape of the energy-distribution curve of inelastically-scattered electrons is practically determined by the properties of the coating material, and not of the base. In the region $d > \lambda$, the shape of the energy-distribution curve does not change with increasing d ; only the relative number of inelastically-scattered electrons varies with the coefficient η . There are 10 figures.

SUBMITTED: March 19, 1962

Card 2/2

BRONSHTEYN, I.M.; FRAYMAN, B.S.

Problem of the boundary energy of slow secondary electrons.
Izv.vys.ucheb.zav.;fiz. 2:172-173 '62. (MIRA 15:7)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni
A.I.Gertsena.

(Secondary electron emission)

FRAGHEN, I. A.

"Peculiarities of the Storage of Apples in Moldavia." Cand Tech Sci, Tbilisi State
U. Imoni I. V. Stalin, Min Higher Education USSR, Tbilisi, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations defended at USSR Higher
Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

FRAYMAN, I. A.

4765. FRAYMAN, I. A. Kratkiye ukazaniya po khraneniya yablok. kishinev, partizdat, 1954. 28 s. sill. 20sm. (moldav. filial akad, nauk sssr. in-t plodovodstva, vinogradarstva i vinodeliya). 2,000 ekz. bespl. -- na obl. avt. ne ukazany --- (55-22)P 634.11: 631.563

S0: Letopis' Zhrunal' nykh Statey, Vol. 7, 1949

ARASIMOVICH, V.V.; PRAYMAN, I.A.

[Storage of apples in Moldavia] Khranenie iablok v Moldavii.
Kishinev, 1956. 57 p. [In Moldavian]. (MLRA 10:6)
(Moldavia--Apple--Storage)

ARASIMOVICH, V.V.; VASIL'YEVA, L.A. [deceased]; DUSHUTINA, K.K.;
~~FRAYMAN, I.A.~~

Biochemistry of ~~pear~~. Vop. fiziol. i biokhim. kul't. rast.
no.2:3-29 '62. (MIRA 15:12)

(Moldavia--Pear)
(~~Fruit~~—Chemical composition)

FRAYMEN, I.A.; MASYUKOVA, O.V.

Biochemistry of quince. Vop. fiziol. i biokhim. kul't. rast.
no.2:30-51 '62. (MIRA 15:12)

(Moldavia—Quince)
(Fruit—Chemical composition)

VINAROV, I.V.; FRAYMAN, I.B. [deceased]; SHUL'GINA, V.S. [Shul'gina, V.S.]

Obtaining pure rubidium salts from technical rubidium dioxide.
Khim. prom. [Ukr.] no.1:30-31 Ja-Mr '65. (MIRA 18:4)

PETROV, B.A., kand.tekhn.nauk; YURGANOV, N.N., kand.tekhn.nauk;
YEL'TSOV, Ye.V., inzh.; BOLDYSHEVA, N.I., inzh.; FRAYMAN, L.S.,
inzh.; SAFONOV, N.A., inzh.

Pneumatic method of feeding into a kiln beyond a continuous
curtain of dust caught by electric filters. TSement 30
no. 2:17-19 Mr-Ap '64. (MIRA 17:5)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy i
proyektnyy institut tsementnoy promyshlennosti i Yemanzhelinskiy
tsementno-shiferenny kombinat.

FRANK, E. L.

Chemical

Dissertation: "Investigation of Rectification
and Mass Exchange in Film-Type Columns."

9/1/50

Moscow Inst of Fine Chemical Technology
Imeni M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413610020-4

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413610020-4"

5(1)

AUTHORS:

Zhigach, A. F., Antonov, I. S.,
Kazakova, Ye. B., Frayman, R. S.

SOV/64-59-2-7/23

TITLE:

Continuous Method of Obtaining an Equimolecular Mixture of
Ethyl-Aluminum Chlorides (Nepreryvnyy metod polucheniya
ekvimolekulyarnoy smesi etilalyuminiykhloridov)

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 2, pp 123-126 (USSR)

ABSTRACT:

In contrast with other methods (Ref 1,a), in the present case the reaction between aluminum and ethylchloride (I) was carried out in a mixture of an equimolecular amount of alkyl aluminum halides with the latter serving as catalysts. The metal (or the aluminum alloy) is introduced into the mixture and reacts with a weak solution of (I) so that the process takes place continuously and without danger. In order to determine the influence exercised by various factors on the course of the reaction, experiments were made in glass ampoules which demonstrated (Table 1) that under the given conditions (5 hours, 50-55°) pure (I) reacts neither with aluminum nor with duralumin (DA). By increasing the addition to the catalyst the reaction is accelerated. In this connection the reaction with (DA) (containing 4% copper) takes place more

Card 1/2

Continuous Method of Obtaining an Equimolecular Mixture of SOV/64-59-2-7/23
Ethyl-aluminum Chlorides

rapidly than with Al. Investigations of the technological parameters of the processes showed that it is more favorable to carry out the reaction in the liquid phase than in the gas phase. The experiments with the liquid phase were made in a glass vessel (100 cm³) (Fig 1) in the laboratory. The (DA) - splinters were introduced into an equimolecular mixture of bromides (6g) and (I) was introduced into the vessel from below. The reaction temperature was controlled by the velocity of passage of (I) and a heating jacket. The experimental results obtained were examined in a larger reaction column (700 cm³) and compared to each other (Table 2). A reaction column of stainless steel (Fig 2) was used for further experiments in a plant (Fig 3). The reaction product obtained exhibited the following composition: 21.3% Al, 44.1% Cl, 29.0% C₂H₅. The coefficients of efficiency of the test plant are tabulated (Table 3). There are 3 figures, 3 tables, and 3 references.

Card 2/2

BLAVAN, R.S., kand. tekhn. nauk; SYUMIN, V.G.; VOLKOV, V.L., doktor
tekhn. nauk

Separation of finely dispersed powder fractions on a battery
of cyclones. Khim. obr. no. 7:494-498 J1 '61.

(MIRA 14:7)

(Separators(Machines))

S/191/62/000/004/007/017
B110/B138

11.8170

AUTHORS: Sakhiyev, A. S., Frayman, R. S., Kornev, M. A.

TITLE: Electrostatic precipitator for removing solid impurities from the gases of alkyl and aryl chlorosilane syntheses

PERIODICAL: Plasticheskiye massy, no. 4, 1962, 19-21

TEXT: The electrostatic cleaning of gaseous methyl and phenyl chlorosilanes was studied on the apparatus shown in Fig. 1. Gas supply was checked on flow meter 2. The dust content of the gas flow before and after passing through the filter was measured by means of outlets with adapters 12. Flow meter 13 measured the gas flow through 12. The electrostatic precipitator consisted of a tube 95 mm diam, and corona-discharge electrode 11, of Nichrome wire 3750 mm long and 1.8 mm diam, attached to Teflon insulator 7. High-voltage was supplied by a step-up-cum-rectifying system for full-wave rectification consisting of a high-voltage 220v/110kv transformer, four KP-110 (KR-110) high-voltage kenotrons, and four 220/12v filament transformers to the kenotrons, and the control panel. Rectification was carried out according to the Graetz

Card 1/3

X

Electrostatic precipitator for...

S/191/62/000/004/007/017
B110/B138

system. The adapter, 120 mm long and 10 mm diam, had 10-12 holes 2 mm diam in the bottom (Fig. 4). Asbestos fiber and a rigid wire spiral underneath the bottom protected the glass wool packing from crushing. The dust content after filtering was $0.0518-0.103 \text{ g/m}^3$. The efficiency of the electrostatic precipitator was over 99 %. Since 13.1 kg of solid fragments were separated in the production of 213 liters of phenyl chlorosilane condensate, the content of solid fragments in the uncleaned condensate would amount to $13.1 \cdot 1000 / 213 = 61 \text{ g/liter}$. Without the filter, the condensate was quite black and opaque. It was not possible to vary the throughput rate appreciably in the experiments since, with the size of reaction vessel and filter used, it depends on the rate of the pseudoliquefied contact mass. The optimum rate has yet to be found, but electrostatic precipitators for industrial reaction vessels cannot be too large as the hourly volume of gas for cleaning is small. The corona discharge electrodes were cleaned by vibrations in the longitudinal direction at 25 cps and an amplitude of 2 mm, and the precipitator electrode by vibrations in the transverse direction at the same frequency and amplitude of 0.3 mm. In experiments with methyl chlorosilanes the

Card 2/4

Electrostatic precipitator for...

S/191/62/000/004/007/017
B110/B138

temperature of the heat carrier was 200°C, and 250°C in the synthesis of phenyl chlorosilanes. The following data are given: voltage 30 kv, amperage 2 ma, rate of gas flow < 0.1 m/sec. The synthesis of methyl chlorosilanes took place at 1 atm gauge pressure and that of phenyl chlorosilanes at 1 atm gauge pressure. There are 4 figures and 2 tables.

Fig. 1. Diagram of setup used for investigating electrostatic precipitation of gaseous methyl and phenyl chlorosilanes.

Legend: (1) Supply tank, (2,13) direct-reading flow meters, (3) heater-evaporator, (4) reaction vessel, (6) outlet of ditolyl methane heat carrier, (7) Teflon insulator, (8) sylphon bellows, (9) stand, (10) vibrator, (11) corona-discharge electrode, (12) adapter, (14) condenser, (15) collecting vessel, (16) heat carrier inlet, (18) earth.

Fig. 4. Adapter.

Legend: (1) holder for adapter, (2) packings, (3) adapter, (4) electric heater, (5) insulation, (6) spring, (7) glass wool, (8) asbestos.

Card 3/4

X

FRIDENBERG, A.E. [deceased]; SYRKIN, V.G. (Moskva); TOLMASSKIY, I.S. (Moskva);
FRAYMAN, R.S. (Moskva)

High dispersion iron carbonyl powder for high frequency magnetic
dielectrics. Porosh. met. 3 no.1:33-41 Ja-F '63. (MIRA 16:3)
(Metal powders) (Iron carbonyl) (Dielectrics)

FRAYMAN, R.S., kand.tekhn.nauk; SYRKIN, V.G., kand.tekhn.nauk; VOLKOV, V.L.,
doktor tekhn.nauk

Investigating the process of the separation of fine metal powders in a
cyclone bank. Khim.mashinostr. no.6:20-22 N-D '63. (MIRA 17:2)

GFL'ERIN, E.N.; FRAYMAN, R.S.

Studying the heat transfer from conical surfaces to a fluidized bed.
Khim.prom. no.11;806-810 '63. (MIRA 17:4)

FRAYMAN, R.S.; IVANOVA, N.A.

Determination of hydrogenated forms of quinones in the production of hydrogen peroxide. Zav. lab. 30 no.11:1323-1325 '64
(MIRA 18:1)

FRAYMAN, R.S.

Design of reactors for the synthesis of methylchlorosilanes
taking the kinetic factors into account. Zhur. prikl. khim.
87 no. 4:911-914 Ap '64. (MIRA 17:5)

FRAYMAN, R.S.

Relationship between material flows in the direct synthesis of
methylchlorosilanes. Khim. prom. 41 no.10:730-732 O '65.
(MIRA 18:11)

L 42982..66 FWT(m)/CWP(1)/T RM/WR/JR/JED/JXT(CZ)

ACC NR: AP6013232

SOURCE CODE: UR/0413/66/000/008/0022/0022

INVENTOR: Volkov, V. L. ; Drozdov, A. K. ; Kabyshev, A. S. ; Leont' yev, N. G. ;
Ustinov, V. K. ; Frayman, R. S. ; Tsirlin, A. M.

ORG: none

TITLE: Preparation of trichlorosilane. Class 12, No. 180594¹ [announced by the
Podol' sk Chemical Metallurgy Plant (Podol' skiy khimiko-metallurgicheskiy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 22

TOPIC TAGS: silicon compound, hydrogen chloride, explosive forming

ABSTRACT: An Author Certificate has been issued for a method of obtaining a trichlorosilane by an interaction of silicon-containing crudes with hydrogen chloride. To prevent forming dangerously explosive polychlorosilanes,¹ coarse-crushed silicon-containing crude of 30-mm particle size is used with a continuous feed of hydrogen chloride. Conversion is completed by reciprocal circulation of the silicon-containing crudes in the reaction apparatus equipped with an arrangement for mixing and conveying solid crude. [Translation] [NT]

SUB CODE:07,11/SUBM DATE: 24Apr64/

Card 1/1 hs

Name: FRAYMAN, S. A.

Dissertation: Labor without manual manipulation in cephalic presentation

Degree: Doc Med Sci

Affiliation: Min Health USSR, Central Inst of Advanced Training for
Physicians

Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 1, 1957

FRAYMAN, S. E.

21999 FRAYMAN, S. E. Vvedeniye krovi i lekarstvennykh veshchestv cherez kostnyy
mzg. Vracheb. delo, 1949, No. 7, str. 595-96.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

FRAYMEN, S. B.

PA 47/49761

USSR/Medicine - Injections, Intraosteal
Medicine - Penicillin and Novocaine,
Effect of 1949

"Intraosteal Administration of Penicillin and Novocaine," S. B. Fraymen, Dept of Surg Tuberculosis, Hospital 20th Anniversary of October Revolution, 2 pp

"Vest Khirurgii" Vol LXIX, No 1

Recent technologies involving transfusion of blood through bone marrow have led to the possibility of penicillin and novocaine administrations via similar channels. Excellent results were obtained in inducing anesthetic, but author notes that this

47/49761

USSR/Medicine - Injections Intraosteal 1949
(Contd)

Intraosteal administration should be used supplementary to ordinary methods of anesthesia rather than by itself.

47/49761

FRAYMAN, S.B.

6184. Intravascular method of anaesthesia in limb operations and its anatomical explanation. S. B. Frayman, Leningrad, 1955, No. 14, 38-42. Referat. Zh. Biol. Khim. 1956, Akad. Sci. USSR, 1956. The principle of intravascular anaesthesia is based on the penetration of the anaesthetic along the venous system, its diffusion into the intercellular tissue and its direct effect on the nerve endings of anastomoses infiltrating the nerve cords into the veins of which the anaesthetic penetrates. The technique of anaesthesia consists in the use of a 0.5% solution (0.25% solution) into the sponge parts of the tourniquet, after applying a tourniquet to the limb. Anatomical investigations showed that the anaesthetic can be injected at the points, from which the areas nearest to the skin are the most successful. Anaesthesia below the tourniquet takes place in 5-7 min. after the novocaine skin injection, and lasts until the tourniquet is removed. The advantage of this method consists of complete and quick anaesthesia, a minimum consumption of novocaine (0.1-0.2 g), and the possibility of using the method in acute and chronic diseases and in various traumas, and the absence of any important complications in the application of anaesthesia. (B. K. Kise)

Chair of OPERATIVE SURGERY, State Inst. for ADVANCED
TRAINING of PHYSICIANS

and Dept. Surg. Tulumskan Hospital in 20th Anniversary
October Revolution

BELKIN, Moisey Savel'yevich; FRAYMAN, Tevel' Rubinovich; BUBAKH, N.Ya., red.

[Mechanization of labor-consuming processes in the maintenance of motorbuses; practice of motorbus parks in Moscow] Mekhanizatsiia trudoemkikh protsessov pri tekhnicheskoi obsluzhivani avtobusov; iz opyta avtobusnykh parkov Moskvy. Moskva, Transport, 1964. 45 p.

(MIRA 17:9)

YAKOVLEV, Ye. I., (Lieutenant Colonel of the Medical Service) SARGSYEVA, YE, I.

"The Clinical Aspects of Peptic Ulcer in Young Persons and Generalization on the Experience of Application of Autolaserotherapy in the Combined Treatment of Peptic Ulcer."

Voenno-meditsinskiy Zhurnal, No. 11, December 1961, pp. 63-70

FRAYMAN, Ya.B.

Using the OMKT complex for mining panels by entries to the
rise. Ugol' 40 no.11:42-43 '65. (MIRA 18:11)

1. Glavnyy inzh. shakhty im. S.M. Kirova kombinata Kuzbassugol'.

100000, 10.00.

Absolute method for the thorough determination of the thermophysical characteristics of nonmetallic materials. Izv. fiz. zhur. no.10:72-79 0 '64. (MIRA 17.11)

1. Institut teplo- i masopobnena AN BSSR, Minsk.

FRAYMOVICH, S.B.

Grinding involute worn gears with disk cone grinding wheels.
Stan. i instr. 34 no.11:28-29 N '63. (MIRA 16:12)

FRAYMAN, Ya. B., podpolkovnik meditsinskoy sluzhby; SERGEYEVA, Ye. I.,
mayor meditsinskoy sluzhby

Clinical aspects of peptic ulcer in young persons and the
generalization of experience in using autohemotherapy in the
compound treatment of peptic ulcer. Voen.-med. zhur. no.12:
67 D '61. (MIRA 15:7)

(PEPTIC ULCER) (BLOOD AS FOOD OR MEDICINE)

FRAYMAN, Ya.B.

Results of operating the KM-87 unit in the Kuznetsk Basin.

Ugol' 39 no.3:38-45 My'64.

(MIRA 17:5)

1. Shakhta im. Kirova tresta Leninugol'.

74-1

AUTHOR: None given 94-2-6/27

TITLE: Electric power tariffs. (0 tarifakh na elektricheskuyu energiyu)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13. No.2. pp.17-18 (USSR)

ABSTRACT: An editorial note states that "Promyshlennaya Energetika" 1956, No.9. and 1957, No.1. contained articles on electric power tariffs. Contributions to discussion on these articles are summarised below:-

Bril' R.Ya. (Cand.Tech.Sci.) Leningrad Engineering-Economics Institute.

This author supports a two-part tariff and disagrees with the proposals of A.N. Grekov and A.S. Fayershteyn to base the flat-rate on the consumer's contribution to the system peak. Large consumers should not receive electricity too cheaply. It is time to review tariffs for electric heating.

Dzeventskiy, A.Ya. (Cand.Tech.Sci.) (Energosbyt Uzbekenergo)

This author states that a two-part tariff does little to encourage off-peak loads and thinks that it is disproportionately complicated.

Minevich, A.B. (Engineer). (Chief Power Engineer of the Stalinsk Engineering Works).

The author considers that the two-part tariff retards the economical use of electric power in industry. A flat-rate tariff is preferable.

Card 1/2

Electric Power Tariffs.

94-2-6/27

Frayman, Ya.I. (Engineer). (Tashkent Paper Works)

A two-part tariff often has a bad effect on the loading of industrial transformers and on the provision of spare transformer capacity.

AVAILABLE: Library of Congress.

1. Electric power production-USSR

Card 2/2

FRAYNDT, V.

New developments in the organization of ship repairs. Rech.
transp. 23 no.11:29 N '64. (MIRA 18:3)

1. Glavnyy inzh. Omskogo sudoremontnogo zavoda.

SAKHAROV, V.I., inzh.; FRAYNT, T.M., inzh.

Cementless concretes for protecting pavements. Avt. dor. 28
no.9:2-4 S '65. (MIRA 18:10)

TEST AND PROPERTIES INDEX									
FRAYSHIAT, D.M.									
10									
Aniline hydrochloride. M. N. Kinsfeld and D. M. Frayshiat. Russ. 87,130, May 31, 1940. To lower the temp. in the reaction zone aniline is atomized together with water in an atm. of gaseous HCl.									
ASB-SL-8 METALLURGICAL LITERATURE CLASSIFICATION									
FROM: 804199									
CLASS: 004 004 111									
CLASS: 004 004 111									

FRAYMAN, Ya.B., podpolkovnik med.sluzhby

Kidney diseases under conditions of the Far North. Voen.-med.
zhur. no. 2:81-82 F '61. (MIRA 14:2)
(RUSSIA, NORTHERN--KIDNEYS--DISEASES)

FRAYMAN, Yu.Ye.; KATIBNIKOVA, E.V.

Problem of obtaining linear heating. Trudy Inst. energ. AN BSSR
no.11:27-30 '60. (MIRA 14:9)
(Heating)

SHASHKOV, A.G.; FRAYMAN, Yu.Ye.; VERZHINSKAYA, A.B.; KATIBNIKOVA, E.V.

Methods for determining the thermophysical characteristics of materials at room and medium temperatures. Inzh.-fiz. zhur. 4 no.9:111-119 S '61. (MIRA 14:8)

1. Institut energetiki AN BSSR, g. Minsk.
(Materials--Thermal properties)
(Thermoelectricity)

FRAYMNA, R.S.; GEL'PERIN, E.N.; BOBNEVA, A.A.

Multizonal apparatus for carrying out processes in a fluidized
bed. Khim.prom. no.11:827-830 N '62. (MIRA 16:2)
(Fluidization—Equipment and supplies)

FRAYNT, I.S., inzh.; EYDEL'MAN, A.M., inzh.

Experience with machinery for removing and assembling molds.

Stroi. i dor mash. 7 no.6:27 Je '62. (MIRA 15:7)

(Minsk--Precast concrete)

28(2)

AUTHOR:

Frayshtat, D. M., Chief Engineer of
the "Soyuzreaktiv" Trust

SOV/32-25-2-72/73

TITLE:

On the Supply of Laboratories With Reagents, Containers, and Apparatuses (O snabzhenii laboratoriy reaktivami, posudoy i priborami).

(On the Occasion of the Articles by V. Z. Zharkikh and Yu. I. Cheremovskiy, Published in the Periodical "Zavodskaya laboratoriya", Nr 7, 1958) (Po povodu statey V. Z. Zharkikh i Yu. I. Cheremovskogo, opublikovannykh v zhurnale "Zavodskaya laboratoriya" No 7 za 1958 g.)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, pp 249-250 (USSR)

ABSTRACT:

At present, the national economy of the USSR is supplied with containers and apparatuses for laboratory use by the Rosglavpriborsnabsbyt pri Gosplane RSFSR and with chemical reagents by the "Soyuzreaktiv" Trust Gosudarstvennogo komiteta Soveta Ministrov SSSR po khimii (State Committee of the Council of Ministers of the USSR on Chemistry). There are three reasons for the difficulties arising in the supply: 1. the production is too low, 2. the transportation network of the

Card 1/3

On the Supply of Laboratories With Reagents,
Containers, and Apparatuses. (On the Occasion of the Articles by V. Z. Zharkikh
and Yu. I. Cheremovskiy, Published in the Periodical "Zavodskaya laboratoriya",
Nr 7, 1958)

SOV/32-25-2-72/78

"Soyuzreaktiv" Trust is inadequate, and 3. difficulties may arise due to the flammability and corroding properties of many chemicals in the course of transportation. A seven-year plan (1959-1965) has been drawn up by the Goskomitet for Chemistry to eliminate these difficulties. Within this period, six new plants are to be built, and existing plants reorganized and expanded. By the end of the seven-year plan, 10,000 different kinds of reagents are to be produced. At present, the "Soyuzreaktiv" Trust has 37 sales branches at its disposal, some of which have to cater 5-8 districts, while the sales branch Novosibirsk has to supply as many as 18 districts in Siberia and the Far East. Since this system is quite inadequate, plans for the near future provide for the construction of new sales branches at Irkutsk and Khabarovsk, and new warehouses at Chelyabinsk, Karaganda, and in some other cities. In 1957, a special warehouse No 2 for so-called "ordered reagents" was established in Moscow (Moscow, Varshavskoye shosse, 135a).

Card 2/3

On the Supply of Laboratories With Reagents.
Containers, and Apparatuses. (On the Occasion of the Articles by V. Z. Zharkikh
and Yu. I. Cheremovskiy, Published in the Periodical "Zavodskaya laboratoriya",
№ 7, 1958)

SOV/32-25-2-72/78

A number of difficulties encountered by the Trust are mentioned, such as conflicts with city **authorities** when new branches are to be founded, or problems arising in the transportation of reagents. Moreover, it occurs occasionally that reagents are available but customers are inadequately informed, as it happened to V. Z. Zharkikh in the case of a few reagents.

ASSOCIATION: Trest "Soyuzreaktiv" (Trust "Soyuzreaktiv")

Card 3/3

COMMON ELEMENTS																										COMMON VARIABLE ELEMENTS																									
1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESS AND PROPERTIES INDEX																																																			
<div style="display: flex; justify-content: space-between;"> FRAYSHTETER, F. P. 21 </div> <div style="text-align: center; margin-top: 100px;"> <p>An accelerated method for determining ash in coal. F. P. Frayshteter. <i>Zavodskaya Lab.</i> 8, 990 (1939); <i>Khim. Referat. Zhur.</i> 1940, No. 3, 64.—For a more rapid combustion of coal it is proposed to use a boat 60 mm. long, 30 mm. wide and 10 mm. high, sepd. into several sections by partitions approx. 1 mm. high.</p> <p style="text-align: right;">W. R. Henn</p> </div>																																																			
<div style="display: flex; justify-content: space-between;"> ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION 6-2 </div>																																																			
<div style="display: flex; justify-content: space-between;"> 1ST ORDER 2ND ORDER </div>																										<div style="display: flex; justify-content: space-between;"> 3RD ORDER 4TH ORDER </div>																									
<div style="display: flex; justify-content: space-between;"> 1ST ORDER 2ND ORDER </div>																										<div style="display: flex; justify-content: space-between;"> 3RD ORDER 4TH ORDER </div>																									

COMMON ELEMENTS																										COMMON TRANSITION METALS																									
COMMON ELEMENTS													COMMON TRANSITION METALS													COMMON ELEMENTS													COMMON TRANSITION METALS												
COMMON ELEMENTS													COMMON TRANSITION METALS													COMMON ELEMENTS													COMMON TRANSITION METALS												
<p>FRAYSHETER, F. P.</p> <p>CH</p> <p>21</p> <p>Grinding of coal samples for analysis F. P. Fraysheter, <i>Zavodskaya Lab.</i> 10, 545 0 (1941). Where the original sample has an ash content up to 10%, the ash content of the dust is approx. double, minor fluctuations occurring according to the level at which the dust samples are taken. Ash detns. on dust-free samples, therefore, are on the low side. W. C. P. A.</p> <p>ASH-5.1A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

AUTHOR: Frayshteter, F.P.

68-58-5-2/25

TITLE: The Terminology of Main Technological Properties of Coals
Should be Standardised (Standartizirovat' terminologiyu
osnovnykh pokazateley tekhnologicheskikh svoystv ugley)

PERIODICAL: Koks i Khimiya, 1958, Nr 5, pp 10 - 11 (USSR).

ABSTRACT: It is pointed out that quite often different meanings are ascribed to the same term. Moreover, there is a tendency to compare two or more results of different tests which have nothing in common. The basic index of coal properties should be the strength of coke substance which can be expressed by various coal properties. Therefore, the first object is to define what is the strength of coke. The author discusses the possibilities of such definition proposing to express it as a resistance to destruction, measured by the amount of work required to produce a unit of new surface. Coking ability of coal is considered as an ability to produce metallurgical coke. The author points out that by a common effort some recommendations regarding the terminology as well as methods of determining the coking ability of coals can be made. There are 7 Soviet references.

ASSOCIATION: Zavod "Krasnyy Oktyabr", Leninsk-Kuznetsk
Card 1/1 ("Krasnyy Oktyabr" Works, Leninsk-Kuznetsk)

SOV/68-59-4-7/23

AUTHOR: Frayshteter, F.P.

TITLE: The Strength of the Coke Substance (Prochnost' koksovogo veshchestva)

PERIODICAL: Koks i Khimiya, 1959, Nr 4, pp 20-22 (USSR)

ABSTRACT: The problem of measuring strength properties of coke is discussed. It is pointed out that the standard drum test is not based on theoretical premises and the strength indices obtained in this test cannot be correlated with the operation of blast furnaces. It is considered that the strength of coke should be tested by the same methods as are normally used for testing the strength of brittle materials and metals. The influence of fissures and cracks can be minimised by an appropriate preparation of test specimens e.g. from 25-5 mm fraction. As the coke is not uniform in strength it is proposed to divide the sample of coke (of the order of 400 kg) into 3 classes according to appearance (colour and porosity) by hand picking, select 15 pieces free from fissures from each fraction and cut out cube specimens for crushing

Card 1/3

The Strength of the Coke Substance

SOV/68-59-4-7/23

test. An example of such test is given in table 1. The results indicate that the crushing strength of each class varies within narrow limits. From the mean results for crushing strength of each class and the proportion of each class in the sample, the average crushing strength of coke can be calculated. It was shown during testing that coke is anisotropic in respect of strength (fig 2, table 2), the strength falls from the cauliflour end towards the tar line plane. The strength of the individual classes of coke selected from one sample varied from 238 to 91 kg/cm² with a mean strength of 141.4 kg/cm². There should be some relationships between the crushing strength of coke and its other mechanical properties such as hardness, brittleness, elasticity, surface energy, abrasive properties etc., which when determined may simplify the testing procedure. Some special features in the distribution of pores in the lump of coke were noticed which deserve further studies. In the editorial note,

Card 2/3

The Strength of the Coke Substance

SOV/68-59-4-7/23

the editorial office requested the readers to express their views on the subject. There are 3 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Zavod "Krasnyy Oktyabr'", g. Leninsk-Kuznetskiy
("Krasnyy Oktyabr'" Works, Town Leninsk-Kuznetskiy)

Card 3/3

5(2)

AUTHOR:

Frayshteter, F. P.

05768

SOV/32-25-10-57/63

TITLE:

On Some Errors in GOST Standards for Methods of Chemical Analysis

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, p 1275 (USSR)

ABSTRACT:

Several errors and inaccuracies in GOST standards are pointed out, and the standard GOST 2604-44 is given as an example. Apart from the fact that the text contains unnecessary repetitions, it also contains several misprints and unclear passages. Thus, the description of the production of a titrated Mohr's salt solution according to GOST 3007 does not make it clear how much sulphuric acid should be used. In the description of the preparation of a 0.03n potassium permanganate solution, reference is once made to GOST 4700, another time to GOST 4780, and, besides, once 0.03n and once 0.3n is written. The edition of GOST standards for 1960 should contain abridged descriptions for GOST 2604-44 and 2331-43, and a more concise and faultless text ought to be worked out.

ASSOCIATION:

Zavod "Krasnyy Oktyabr'" (Plant "Red October")

Card 1/1

FRAYSHETER, F.P., inzh.

Preparation of certain Kuznetsk Basin coals in order to obtain low-ash concentrates for the electrode industry. Nauch.trudy KuzNIIUgleobog.
no.2:212-220 '64. (MIRA 17:10)

28830

S/169/61/000/004/005/026
A005/A130

3,2430 (1482,1559)

AUTHORS: Frayyer, P.S.; Ney, Ye.P.; Vinkler, Dzh.R.

TITLE: Balloon observation of solar cosmic rays on March 26, 1958

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1961, 15, abstract 4 G 90.
(Tr. Mezhdunar. konferentsii po kosmich. lumach, 1959, v. 4. Moscow, AN SSSR, 1960, 89 - 95)

TEXT: The authors report on observations of a low-energy solar component in cosmic rays at geomagnetic latitude 55°N. On March 23, 1958, a flare of class 3+ was noted on the sun which was accompanied by a radio noise splash of type IV. in a wide frequency range. On March 25, 15:40 min universal time, a great magnetic storm began in connection with this flare, a simultaneous absorption of cosmic radio noises at a frequency of 27.6 Mc at high latitudes, and a decrease in cosmic ray intensity. The return of cosmic ray intensity to normal level continued until April 10. On March 21 and 26 and April 8, balloon ascents were carried out with equipment consisting of an ionization chamber, a single counter and photoemulsion. For measurements on March 21 and April 8 the cosmic ray intensity was normal. On March 26, 13 h 00 min, the intensity was weaker by 23.3% than on

Card 1/2

CH

Balloon observation of solar cosmic rays on....

28830

S/169/61/000/004/005/026
A005/A130

March 21 in conformity with a decrease in intensity at the earth's surface. However, an increase in intensity soon occurred, which continued until 19 h 00 min. This increase in intensity is connected with an increase of the stream of protons with energies of 120 - 180 Mev per 0.06 particle $\cdot \text{cm}^2 \cdot \text{sec}^{-1} \cdot \text{steradian}^{-1}$. The stream of α -particles (with $E > 1.3$ Bev) did not vary. It is noted that the discovery of protons with energies (~ 0.2 Bev) considerably lower than cut-off energy (~ 1 Bev) may be explained by the action of the solar corpuscular stream on the earth's magnetic field. Differential energy spectra of protons and α -particles are given.

N. Kaminer

[Abstracter's note: Complete translation.]

44

Card 2/2

3,2430 (1482,1557)

28831 S/169/61/000/004/006/026
A005/A130

AUTHORS: Frayver, P.S.; Ney, Ye.P.; Vinkler, Dzh.R.

TITLE: Observations of solar cosmic rays

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1961, 16, abstract 4 G 91.
(Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 4. Moscow, AN SSSR, 1960, 96 - 101)

TEXT: The authors report on observations of low-energy cosmic rays of solar origin at Minneapolis (56°N) on May 12, 1959. On the basis of measurements carried out by means of Geiger-Müller and scintillation counters, an ionization chamber and photoemulsion piles at altitudes of about 10 g/cm², and comparison of these data with solar and geophysical effects, the authors stretch the following sequence of events: On May 10, 21 h 05 min universal time, a chromospheric flare of the 3+ class was observed on the sun. Data from observations of absorptions of cosmic radio emission in the polar regions indicate that protons with an energy of E ~ 100 Mev arrive at the upper atmospheric layers within an hour after flare-up. On May 11, 23 h 27 min, a magnetic storm set in which was accompanied by the Forbush effect with an amplitude of decrease of about 15%. Four hours af-

Card 1/2

X

28831

S/169/61/000/004/006/026
A005/A130

Observations of solar cosmic rays

ter the magnetic storm set in protons with a minimum energy $E \sim 120$ Mev were recorded at Minneapolis, although the cut-off threshold is equal to about 300 Mev. At 08 h 30 min in the maximum phase of aurora development, the scintillation counter recorded an x-ray splash. At 14 h 00 min the cosmic ray intensity attained normal magnitude. The stream of additional emission (protons) was characterized by an integral spectrum of the form $N(>E) \sim E^{-6.0}$ and $E_{\max} < 1$ Bev. Analysis of the photoemulsion data shows that the angular distribution of the protons was isotropic. A marked increase of electron intensity was not detected.

N. Kaminer

[Abstracter's note: Complete translation.]

✓

Card 2/2

VOTAVA, V.; PRAZ, Z.

Micromanometer with a pressure apparatus for direct lymphadenography. Sbor. lek. 66 no.11:336-337 N '64.

1. I. klinika tuberkulózy fakulty všeobecného lékařství
University Karlovy v Praze, (zastupitel přednosty doc. dr. L.
Levinsky).

FRCEK, P.

Observation of ball lightning. Meteor zpravy 16 no.1:24 F '63.

PRCZKOWSKIA, Marian; GINKO, Tadeusz; PAWLIK, Alfred

Lytic cocktail in post-traumatic shock. Polski tygod. lek. 14 no.7:
303-306 16 Feb 59.

1. Z II Kliniki Chirurgicznej Sl. Akademii Medycznej; kierownik: prof.
dr Jozef Gasinski. Adres: Zabrze, ul. 3 maja 13, II Kl. Chir. Sl. A.W.
(HIBERNATION, ARTIFICIAL, in various dis.
post-traum. shock (Pol))
(SHOCK, ther.
artif. hibernation in post-traum. shock (Pol))

FRDYA, M., MORKUS, J.

Shall we use high-frequency heating in practice? p. 88

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho
prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, No. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 1960
Uncl.

SYMBOLS																										ALPHABET																										NUMERICAL																										PUNCTUATION																										OTHER																									
A-Z																										0-9																										. , - : ; ' " ! ? * + = % & ' () [] { } ~																										/ \ _ ` ^ & # \$ % ^ & * ~																										~																									
<p><i>R</i></p> <p>Kleinstein, M. P., and Freberg, A. K. (editors). SYMPOSIUM ON PROBLEMS OF RATIONALIZATION AND PLANT CONSTRUCTION IN THE REFRACTORIES INDUSTRY. State Inst. for Designing Plants of the Refractories Ind. "Gipro-ogneprow," Leningrad, 1934. 234 pp.--The symposium contains four articles on actual problems of the refractories industry of the U.S.S.R. An article by V. G. Vakhirev and S. W. Babus treats the fundamental technical and economic problems of the development of the refractory industry in the Urals; an article by M. M. Shrikov deals with the problems of new mining methods; A. D. Zepin discusses the rationalization of driers and kilns; A. K. Freberg describes the development of the dry pressure method of production of grog brick.</p>																																																																																																																																	